

Appln No. 09/640,963

Amdt date September 21, 2005

Reply to Office action of June 24, 2005

REMARKS/ARGUMENTS

Claims 1-45 are pending in this application, of which claims 1-20 are allowed. Claim 43 is objected to, but would be allowable if rewritten in independent format.

Claims 21, 26-27, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskowski (U.S. Patent No. 5,566,189). Claims 22-25, 28-31, 35-39, and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskowski in view of Li (U.S. Patent No. 6,385,752). Applicant respectfully traverses these rejections.

Claim 21, as amended, now recites "compressing a puncture mask via a compression circuitry" which is not taught nor suggested by Laskowski. (Emphasis added). The Examiner acknowledges that Laskowski does not expressly teach compressing a puncture mask. However, the Examiner relies on the disclosure in column 2, lines 15-18 of Laskowski of a decoder that may take the form of a programmable device that may "allow the desired depuncture pattern and rate to be stored or programmed into the decoder," to contend that it would have been obvious to compress and store a puncture pattern in the decoder in compressed form. The Examiner contends that there is motivation to do so because Laskowski acknowledges that storing the entire puncture pattern in shift registers or similar components requires a relatively large amount of logic circuitry.

Although Laskowski may recognize the problem of storing puncture patterns, it proposes a totally different solution to the problem. Specifically, Laskowski proposes a depuncturing circuit that is relatively simple and uses few logic components.

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(Col. 1, lines 39-45). Laskowski's depuncturing circuit takes advantage of the observation that a given bit in a punctured data stream will never be more than a predetermined number of bit-spaces away from its original position in the pre-punctured data stream. Furthermore, the depuncturing circuit makes use of a depuncture rate for the depuncturing, such as the one illustrated in FIG. 4. The depuncture rate illustrated in FIG. 4 is "1101." (Col. 5, lines 21-22).

Even if the depuncturing rate were to be stored in the decoder, there is no teaching or suggestion in Laskowski that the depuncturing rate is first compressed "via a compression circuitry" as is now claimed in claim 21. Laskowski in fact teaches away from such a compression circuitry. The compression circuitry would increase the complexity of the decoder in that it would have to introduce a decompression circuitry to decompress the compressed pattern, which goes against Laskowski's goal of "a depuncturing circuit that is relatively simple, uses few logic components, is easily designed and implemented, and is easily modified to accommodate different puncture patterns and rates." (Col. 1, lines 39-45). Accordingly, claim 21 is now in condition for allowance.

Independent claim 27 recites "retrieving a compressed puncture mask from a semiconductor memory, the compressed puncture mask being generated via a compression circuitry that compresses puncture mask data; decompressing the compressed puncture mask via a decompression circuitry to generate the puncture mask data; and deleting particular bits from a data sequence according to the puncture mask data in the decompressed

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puncture mask." (Emphasis added). Laskowski fails to teach or suggest such compression and decompression via compression and decompression circuitries, as is discussed above with respect to claim 21. Accordingly, claim 27 is now in condition for allowance.

Independent claim 34 includes limitations that are similar to the limitations of claim 27 which place claim 27 in condition for allowance, and is therefore also in condition for allowance.

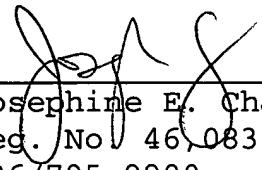
Claims 22-26, 28-33, and 35-45 are also in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain.

In view of the above amendments and remarks, reconsideration, reexamination, and an early indication of allowance of all pending claims 1-45 are respectfully requested.

Respectfully submitted,

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